8: Ewers E,G-4,5 (1941-1951) 1971 NF6 Blackfoot NF6

322 bowls were made in different sizes. The walls of some of them were less than three-eighths of an inch thick. These wooden utensils served for soup and serving bowls, dishes, and drinking cups.

411 Even though Blackfoot warriors had been carrying firearms for more than a century, the bow and arrow was still their favorite buffalo-hunting weapon. The flint arrowhead had been superseded by one of hoop iron, which the Blackfeet called "wide rope." A barrel hoop from one to two inches wide could be obtained from traders in exchange for a buffalo robe. The Indian arrowhead maker drove an old axe head into the ground and used its top surface for an anvil. He cut out the arrowheads from the hoop iron with a sharp chisel and sharpened their edges with a file. Completed arrowheads were either rounded or square-shouldered, in accordance with the maker's preference. They measured about two and one-half inches long. An expert could fashion fifty or sixty metal arrowheads in a day.

411 Arrowshafts were of sarvis berry, about five hands and two fingers long, measured fist over fist as we would do in choosing sides in a baseball game. Three feathers of the eagle, hawk, crow, or goose were attached to the rear of the shaft with sinew wrapping. The arrowhead was fitted into a slot in the front of the shaft and bound with sinew. To hold the sinew wrapping in place, the portions of the shaft to be wrapped were lightly scored with a knife, and a glue made from boiled pieces of buffalo phallus was applied to these areas with a stick. Arrow makers could tell their finished products by minor differences in construction, as well as by the number, widths, and colors of painted stripes under the feathering.

411 A length of chokecherry about the thickness of a man's wrist was the preferred wood for bowmaking. It was carefully shaved with a knife and bent to a proper double-curve while the wood was still green by tying it at each end and in the center to a sturdy pole and driving wooden pegs between bow and pole midway between each of the ties. In three or four days the bow dried out sufficiently to hold its shape. The bow was backed with sinew, which was glued in place with buffalo-phallus glue.

824 Travois and tipi
335 poles were made from Pinus contorta while the young
[804] trees furnished back-rest poles and bed supports. The back-rest poles were cut about five forearms in length and dried over a fire of rotten logs. One end of the pole was perforated and the other end sharpened. Then a
[531] stick was inserted through the hole and the pole etched. Later it was
[237] painted red and blue with buffalo shoulder-blade applicators. Back-rest
[211] poles were often notched to record the number of camp moves.

802 Story-sticks were prepared by older men and presented to children in
538 return for favors. The sticks were notched to count the number of stories
237 that the man would tell the child. They were often varnished with a
824 solution of boiled hoof and steer phallus and sometimes red ochre was added. Then the stick was polished with a piece of rawhide. Story-sticks were
[342] sometimes used to hang tipi doors.

[824] Wind chimes were made and presented to newly married couples. Little sticks were also prepared and notched to act as fasteners on designated foot-storage bags.

[415] Bowls were fashioned from pine burls (Fig. 33). The process was to
[237] apply grease to the burl, scrape with a rough stone, apply more grease and repeat the process until the bowl was finished. If grease was not used the bowl would crack.

[381] The resin of Pinus contorta was boiled with buffalo phallus and used as
[314] a glue for headdresses and bows. It was also applied to moccasins for
[237] waterproofing.
[294]

824 Polyporus spp.
278

This fungus was often taken from the mountains (stolen occasionally from the Kooteney Indians) or detached from willows. Then it was scraped with a knife and attached to "Weasel-robes" when it could be used in emergency first-aid treatment. It was a styptic on wounds and boiled with Psoralea

[TEXT CONTINUED ON PAGE 119]

23: Wissler E-4,5 (1902-ca.1911) 1918
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old men on the west side of the center pole dance in their places. The rawhide held in front of them, hangs down like an apron. They beat time on it, holding the rawhide in one hand, and the rattles in the other. An old man counts deeds and marks out with a knife the fireplace and the booth for the weather dancers. These are dug while the dancing and shooting take place.[1]

The hole, or fire pit, is dug between the sun pole and the entrance to the dancing lodge. It is about three feet by two and "two hands" deep. A warrior is then called to start the fire. Warriors now come forward in turn to count their coups. In this a man took a piece of firewood and holding it up, called out in a loud voice how he once struck a Sioux, a Snake, etc., then placed it in the fire. When he had recounted all he gave way to the next. Stories are told of men having enough coups to make a fire large enough to threaten the destruction of the dancing lodge. We were able to confirm the statement of Clark[2] that the height of the flame as determined by a buffalo tail hanging down was the criterion for determining a great warrior. One informant states as follows:—

There is always a cow tail hanging down from the center post. In olden times this was a buffalo tail, to the end of which a blackened plume was tied. This hangs down over the fireplace which was used at night to furnish light for the proceedings. The assembled people were entertained by narratives of warriors as they came forward to narrate their deeds; each threw a stick on the fire for each deed counted and he whose fire blazed high enough to reach the tail was considered a great warrior. It was a great honor when a man could tell enough war deeds to scorch the tail. All this time there was singing (the cheering songs) and drumming, while berry soup was served to all. The persons taking part are designated as those "who are about to make the fire." In recent years, this ceremony has been performed in a very perfunctory manner.

After the ceremony, the fire was fed in the ordinary way and kept going during the greater part of the succeeding days. The origin of this dance is often ascribed to Scar-face.

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[1] It will be recalled that in the sun dance of the Dakota type (p. 110) there is a ceremonial shooting at the sun pole. Here the shooting takes place in a perfunctory way, while the pole is dragged to the sun dance site. Yet, McQuesten claims to have witnessed the driving of evil power from the sun lodge at a Blood ceremony in 1912. ("The Sun Dance of the Blackfeet" *Rod and Gun in Canada*, March 1912.) As this is not noted in older accounts and we failed to get information as to it, we suspect it to be due to foreign influences, or perhaps the author's own interpretation.

[2] Clark, *ibid.*, 72.

43: Ewers E,G-5 (1941-1944) 1970
NF6 Blackfoot NF6

Brief Communications

Bodily Proportions as Guides to Lineal Measurements among the Blackfoot Indians

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Elderly Blackfoot informants a quarter century ago recalled certain bodily proportions used by craftsmen and women as guides to lineal measurement in prereservation days. Still other measurements of similar character appear to have been introduced to these Indians by white traders.
[Blackfoot, Assiniboin, Omaha, measurements, arrow-making, trade goods]

Accepted for publication 1 July 1969.

My oldest informants among the Piegan and Blood Indians during the early and middle 1940s were not only members of the last generation of their people to possess lively memories of life in buffalo days, but they also comprised the last generation of the Blackfoot to lack formal schooling and to speak little English. When members of the younger, schooled generations mentioned the length of objects, they spoke in terms of feet and inches. But men and women of the oldest generation expressed lineal measurements in terms of bodily proportions, as their ancestors must have referred to them long ago.

I made no special investigation of lineal measurements per se, but my field notes contain repeated references to older informants' interpretations of these measurements in terms of bodily proportions, especially in their discussions of the manufacture of horse gear and the making of bows and arrows.

The fingerwidth and handwidth were the most commonly mentioned units. Women were the skilled workers in rawhide and makers of riding gear among the Blackfoot in buffalo days. Informants said that they commonly made hackamores and bridles two fingers wide, stirrrup straps one finger wide, and common cruppers and martingales three fingers wide. Three fingers was also considered the most desirable width for a

43: Ewers E,G-5 (1941-1944) 1970
NF6 Blackfoot NF6

woman's belt of thick, commercially processed leather obtained from traders. 804 [439]

The handwidth served as a guide to men in making arrows. One informant, who had hunted buffalo on horseback and participated in the intertribal wars, stated that the proper length of an arrow shaft (not including the head) was five hands and two fingers. He demonstrated how the measurement was made, fist over fist, just as small boys place them along the length of a bat in choosing up sides for a baseball game. Another informant, no less experienced in Indian warfare, preferred an arrow (including the head) seven hands and two fingers in length. 804 411

Two informants cited another bodily measurement as a guide to the length of the bow —the distance from the tip of the middle finger of an outstretched hand and arm to the center of the chest. Thus the length of the bow bore a relationship to the size of the man who made and used it—the larger the man, the longer the bow. If the Indian who made the 2'9" bow found by Lewis and Clark near the Three Forks of the Missouri on July 26, 1805, followed this formula, one might conclude that he was a relatively small man, probably an inch or two shorter than the average height for a Blackfoot of 67.5 inches, cited by Wissler (Thwaites 1904–1905 [2]:273; Wissler 1927:149). [175] [141]

Andrew Garcia, a free trader who offered calico to the women of the Blackfoot and neighboring tribes in the Musselshell Valley of present Montana in 1878, recalled that he measured his cloth in "squaw yards" because he lacked a yardstick, "a yard being from the point of your nose to the tip of your fingers, with your arm stretched out" (Garcia 1968:182). Despite the name by which Garcia knew this measurement, I am inclined to believe that the "squaw yard" was a concept traders introduced among the Indians. Certainly my wife's grandmother, born and raised in Virginia, who would have been a contemporary of Garcia, used that same measurement for dress goods. 804 [439] [177]

We know that Jean Baptiste Trutesu, pioneer French trader among the Arikara and 000

[P. 561-B]

43: Ewers E,G-5 (1941-1944) 1970
NF6 Blackfoot NF6

their neighbors on the Upper Missouri in 1794, offered cloth to the Indians by the *brasse* (brace), the distance covered by the outstretched arms. The Omaha protested to him that "it is too much to pay two beaver or otter hides and two or three deer hides for a *brasse* of cloth" (Nasatir 1952:I:275, 288).

Comparative data on the use of bodily proportions as units of measurement by other tribes of Plains Indians are rarely found in the literature. James L. Long referred to the handwidth as an arrow measurement among the Assiniboin. "The customary method of measuring the length of an arrow was to grasp the stick so that the butt was even with the bottom of the left hand, then measure hand over hand six times. The length usually measured twenty-four inches" (Long 1961). As for the length of the Assiniboin bow, Long stated only that it "varied to suit the user."

James Owen Dorsey reported that when an Omaha made his arrowshafts, he started from the bent elbow (internal angle) and measured along the forearm to the tip of the extended middle finger, over the same, and down the back of the hand to the prominent bone of the wrist next to the little finger" (Dorsey 1889). This appears to have been a more awkward measurement than the one employed by the Blackfoot and Assiniboin for the same purpose.

Precision was not a characteristic of any of these Indian measurements. We know that the hand, by which the White horseman measures the height of a horse at the withers, has the precise numerical equivalent of four inches. But the handwidth of a Blackfoot or Assiniboin arrowmaker may have been more or less than four inches depending upon the hand size of the individual, while the fingerwidth of the Blackfoot woman who made rawhide rope probably measured a little less than an inch.

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